

EMOTIONAL ATTACHMENT: DOES PLACE PLAY A ROLE?

By

SHAWNA HOLMES

A THESIS SUBMITTED IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF
BACHELOR OF INTERDISCIPLINARY STUDIES

THOMPSON RIVERS  **UNIVERSITY**

We accept this thesis as conforming to the required standards:

Patricia McClelland (M.Ed., B.A., ECEC), Thesis Supervisor

Shirley Giroux (M.Ed., B.Ed., B.Sc.)

Lia Vivian (B.A.)

Mark Rowell Wallin (Ph.D.), Co-ordinator, Interdisciplinary Studies

Dated this 22nd day of March, 2014, in Kamloops, British Columbia, Canada

ABSTRACT

Thesis Supervisor: Patricia McClelland

The importance of natural spaces and positive connections to nature in the field of Early Care and Learning is well documented. It would be beneficial to the field to explore a possible relationship between attachment to a physical place, natural or urban, as a child, and secure emotional attachment, as an adult. This questionnaire research project adds to the discussion on the correlation of place and emotional attachment. The results of this analysis indicated (a) there is a relationship between emotional attachment and physical place; and (b) females were found to have stronger physical place attachment than males.

ACKNOWLEDGEMENTS

First of all, I would like to thank my committee. Thank you to my thesis supervisor, Patricia McClelland. The time, guidance, and patience she has shown me will not be forgotten. Thank you to Shirley Giroux for not only participating in my defense, but also for the time and effort she invested into this process. Thank you to Lia Vivian for participating in my defense. Thank you to Dr. Mark Rowell Wallin for your participating in this project.

I would also like to thank my family. Thank you to Oakley Muchow for your love, patience, and editing advice throughout this process. Thank you to Cole Holmes for your inspiration and love. Finally, I would like to thank Mark and Ellen Brown for the support. I cannot say what would have become of this project without your generosity.

Table of Contents

Abstract	ii
Acknowledgments.....	iii
INTRODUCTION.....	1
Defining Emotional Attachment	2
Defining Place Attachment	3
Defining Place Identity	3
Defining Places	4
LITERATURE REVIEW	5
Historical Background	5
Why Study Emotional Attachment	5
Why Study Place Attachment	6
A Possible Relationship	7
In Summary	8
OBJECTIVE	9
METHODS	10
Sampling Procedure	10
Emotional Attachment Measures	10
Place Attachment Measures	11
PROCEDURES	12
Seeking Permission.....	12
Informing the Participants.....	12
Collecting the Data.....	12
RESULTS	13
Quantitative Results of Global Emotional Attachment Questionnaire	13
Quantitative Results of Place Attachment Questionnaire	16
Correlation Results.....	19
DISCUSSION	22
Patterns and Common Themes in Responses.....	22
Conclusion	22
Limitations of Design Threats to Internal and External Validity.....	23
Overall Conclusion	23

APPENDIX A	26
Documents	26
APPENDIX B	31
References	31
APPENDIX C	34
Copy of Letter of Support from Supervisor	34
The Committee.....	35
Email Requesting Permission to Use ECR-RS	36
Certificate of Approval from Thompson Rivers University Ethics Review Board	37

List of Tables

Table 1-1 14

Chart 1-1 14

Table 1-2 15

Chart 1-2 15

Table 2-1 17

Chart 2-1 17

Table 2-2 18

Chart 2-2 18

Chart 3-1 20

Table 3-1 20

Chart 3-2 21

INTRODUCTION

The idea for this project grew out of an interest in the changing pedagogy of childcare to embrace more natural play space opportunities. A number of Canadian and world-wide programs are evolving in acknowledgment of the largest benefit to natural play: the potential of place attachment paired with emotional attachment. The research on a correlation between place attachment and emotional attachment is limited. Although there are numerous studies on the positive connections to nature in the field of Early Care and Learning, this particular project looks to broaden the academic field of childcare by identifying a correlation between the emotional attachment style in adults and place attachment in children.

The nature-based Early Childhood Education and Care (ECEC) programs in British Columbia are still in the early stages of evolution. At this time, Autumn of 2013, an example of an outdoor preschool can be found in Victoria on Vancouver Island (Victoria Nature School: About Us). The Victoria Nature School's philosophy not only fosters developmentally appropriate early numeracy and early literacy skills, but also the opportunity for self-growth through play, music, and movement in natural settings (Victoria Nature School: About Us). This program is still young and has yet to outline its academic results, but the pedagogy is promising.

The stronger documented research on young children in nature-based programming in British Columbia can be found in the Nature Kindergarten Program in School District 62: Sangster Elementary School. The 21 children enrolled in the program for the 2012-2013 school year included 10 girls and 11 boys. The children spent 2.5 hours outside on 179 of the 182 days and were supported by one Kindergarten Teacher, one Early Childhood Educator, and one part-time Aboriginal Support Worker. The children were assessed in three areas: literacy, numeracy, and social responsibility. School District 62 did not elaborate on the assessment methods. In all three fields, few children were not meeting or exceeding expectations at the end of the school year (Nature Kindergarten: Year One Report, 2013). The Nature Kindergarten Website, created by the staff of School District 62, found the benefits of a nature-based program to include improvements in: healthy child development, physical fitness, cognitive development, self-discipline, environmental citizenship, and mental health. The staff also found the children were better able to focus on indoor learning after spending time outside (Nature Kindergarten, 2012). These results, at this time, with this support and cohort indicate the success of the Nature

Kindergarten Program: nature-based education was successful by the British Columbia School District 62's standards. Further exploration of these programs is critical to planning a more appropriate education system for future generations.

Nature-based criteria are inextricably linked to place and yet the current research on nature-based education is lacking sufficient documentation on the value of place attachment in emotional attachment. This research project will attempt to add such documentation. As part of this exploration into correlation between place attachment and emotional attachment, this project will incorporate and connect to the work done by Gordon Jack (2010), Wendy Banning and Ginny Sullivan (2011), and Richard Louv (2012).

Defining Emotional Attachment

Emotional attachment, for the purposes of this paper will be referred to as attachment, can be defined as one specific aspect of the relationship between a child and caregiver that is involved in making the child feel safe, secure, and protected (Benoit, 2004). John Bowlby, a psychoanalyst, developed the evolutionary theory of attachment: a child instinctually seeks and the attachment figure provides security such as protection, soothing, comfort, and help as these instincts are of value to survival (Bretherton, 1985).

Emotional attachment theory stemmed from similar origins as the theory of bonding. The theory of bonding was developed by Klaus and Kennell (1976) and was later proved erroneous; it implied that children needed skin-to-skin contact to bond to the parent (Benoit, 2004).

Children are able to develop a hierarchy of attachments with various caregivers (Benoit, 2004). A child will have a specific attachment relationship with each caregiver depending on how the caregiver responds when the child is hurt, ill, or scared (particularly frightened). When the child is hurt, ill, or scared, his or her attachment system is activated; as the child is comforted and reassured by a sensitive and attuned caregiver, the attachment system it is deactivated (Benoit, 2004).

Depending on how a caregiver typically responds to his or her child, the resultant relationship can be defined as fitting one of four attachment styles: secure, avoidant, resistant or ambivalent, and disorganized. These four attachment styles are built upon Bowlby's theory of internal working models. The main features of these models include: a model of others being trustworthy,

a model of the self as valuable, and a model of the self as effective in interacting with others (Bretherton, 1985). Diane Benoit defines these attachment styles in her article: *Infant-parent attachment: Definition, types, antecedents, measurement and outcome* (2004). The first three types of attachment are categorized as organized because the child knows how to make predictions about the caregiver's reactions and can learn to work around the caregiver.

1. Secure attachment means the caregiver responds in a loving way and the child is comforted when displaying negative emotions.
2. Avoidant attachment means the caregiver responds negatively to the child's negative emotional distress so the child minimizes his or her displays of negative emotions in the caregiver's presence.
3. Resistant or ambivalent attachment means the caregiver responds unpredictably and the child over demonstrates his or her distress in hopes to gain the attention of the caregiver.
4. Disorganized attachment means the caregiver displays frightening, frightened, dissociated, sexualized, or otherwise atypical parent behaviours toward the child; often due to the caregivers own unresolved grief or trauma. With this style of attachment, patterns of caregiving are indiscernible or inconsistent and the child does not know how to respond to the caregiver. This uncertainty results in disorganized attachment.

Defining Place Attachment

Place attachment has been defined by many researchers; however, for the purpose of this particular research project, place attachment will be defined as the development of attachment to a geographical location (Kyle, Absher, & Graefe, 2003). Attachment to a physical location or a geographical location encourages individuals to acquire a sense of belonging and purpose (Kyle, Absher, & Graefe, 2003). The symbolic and emotional values placed upon natural resources (Williams, Patterson, Roggenbuck, & Watson, 1992) are also attributed to place attachment. Place attachment typically develops prior to place identity, but the two concepts frequently overlap due to many studies demonstrating both concepts simultaneously (Hernandez, Hidalgo, Salazar-Laplace, & Hess, 2007).

Defining Place Identity

Environmental psychologists define place identity in relation to cognition. The substructure of a personal identity is based on the physical world the individual interacts with. The cognitions may

include: memories, feelings, attitudes, values, preferences, and experiences (Lengen & Kistemann, 2012). Memory, perception, orientation, attention, and emotion have been seen to act and react quickly if the subject interacts with place. In addition to the aforementioned structures, place perception and place learning is also associated with the limbic system and prefrontal cortex (Lengen & Kistemann, 2012). The limbic system regulates emotion, motivation, and mood, sensations of pain or pleasure, and memory; furthermore, it connects higher and lower brain functions (Carlson, 2013). The prefrontal lobe is involved in planning complex cognitive behaviors, personality, and social behavior regulation (Carlson, 2013). The recognition and memory of places as they relate to emotional memory leads to forms of autobiographical memory (Lengen & Kistemann, 2012), which are essential to sense of self and the creation of identity.

Defining Places

City

For the purpose of this research, City will be defined as urban areas or areas with paved sidewalks or roadways.

Park

For the purpose of this research, Park will be defined as natural areas or areas such as parks, gardens, and grasslands.

Indoors

For the purpose of this research, Indoors will be limited in its definition to only inside buildings.

Outdoors

For the purpose of this research, Outdoors will be limited in its definition to outside of buildings.

LITERATURE REVIEW

Historical Background

Family childcare needs are constantly transforming. The second wave of the women's rights movement significantly increased the focus on child care outside the home. Families, defined as household members who may or may not be related by blood, marriage, or adoption (Mitchell, 2009), have seen childcare needs change over time. The types and availability of childcare in Canada have also changed. There are many options when looking for appropriate childcare; however, many families are looking for what some sociologists call "pathway consumption" or, the purchasing of specialized services designed to give the child the best possible chance of a successful future (Pugh, 2009). One such pathway that has become increasingly popular is natural play. Some families choose this option because they believe natural play is beneficial, while other families choose natural play because it is familiar. The professional programming of quality licensed childcare has always existed as a spectrum from a custodial care position to a vigorous academic education based program to a play-based education. Currently, play-based education is simply not enough; many professionals are choosing play-based education with a focus on connections to nature. The benefits found in nature-based play are physical, social, emotional, and intellectual. Even as they acknowledge the breadth of benefit, childcare professionals may be overlooking the largest benefit to natural play: the potential of place attachment to foster emotional attachment. Although there are numerous studies on the benefits of nature in the field of Early Learning and Care, the research on a correlation between place attachment and emotional attachment is limited. This particular project looks to broaden the academic field of childcare by identifying a correlation between emotional attachment style in adults and those same adults' place attachments as children.

Why Study Emotional Attachment

Emotional attachment has been proven to be a powerful predictor of a child's later social and emotional outcome (Benoit, 2004). If a caregiver promptly picks up a baby that is crying, during the first 6 months of life, four major outcomes can be observed: the baby cries less; the baby learns to self-soothe; the baby will respond more promptly if the baby needs the caregiver to soothe them; and, the caregiver who responded promptly and warmly most of the time will create a secure, organized attachment with the baby (Benoit, 2004).

A child's prefrontal cortex responds to human movement, human voice, and human faces as early as five months of age (Gliga, 2012) and children with early psychosocial deprivation or lack of social interactions suffer immensely from the resultant lack of emotional attachment (Nelson, 2012). Understanding brain activity is critical to understanding all of the connections that lead to increased knowledge of the self and the environment because the serious and negative side effects of psychosocial deprivation can include: reduced brain metabolism in the prefrontal cortex and temporal lobe, enlarged amygdalae, and reduced brain activity (Nelson, 2012).

Why Study Place Attachment

Place attachment, defined as an attachment to a geographical location, contains two components: place identity and place dependence. Place identity is an individual's personal identity in relation to the physical environment and the beliefs, preferences, feelings, values, and goals relevant to a place. Place dependence can be defined as how well a place serves an individual's goal; the place is of value because of its function (Kyle, Graefe, Manning, & Bacon, 2004).

The study *Place Matters: The Significance of Place Attachments for Children's Well-Being* by Gordon Jack (2010) discusses the importance of place attachment in children. Place attachment can foster the development of a child's identity, security, and sense of belonging in relation to the positive or negative feelings a child has about particular places. Place attachment is particularly important to children in the social system as these children seem to develop attachments to places instead of people (Jack, 2010). Jack encourages children in the social system to engage and interact with their community. Whether on walks, in parks, these opportunities for children to play and explore can foster rich interpersonal interactions as well as rich social interactions.

Richard Louv, author of Last Child in the Woods (2008) and The Nature Principle (2012), writes on the physical, the emotional, and the intellectual benefits of natural interactions for children. Admitting there is a place for it, Louv (2012) does not scorn technology; however, he encourages interactions with nature as often as technology. Louv (2012) describes how nature-based therapies are often found to be effective healing agents and even just having exposure to natural environments increases the ability to recover from stress, illness, and injury; which leads to sustainable happiness and health.

Similarly to Louv (2012), Wendy Banning and Ginny Sullivan, co-authors of Lens on Outdoor Learning (2011), examine the learning three to five year-olds can amass through outdoor experiences. The learning includes: curiosity, initiative, engagement, persistence, imagination, invention, creativity, reasoning and problem solving, risk-taking, responsibility, confidence, reflection, interpretation, flexibility, and resilience. In short, Banning and Sullivan outline the social-emotional learning of three to five year-olds; children can learn how they are an integral part of the world around them and can construct a mental model of the connectedness between everyone and everything.

There are many studies of “sense of place” and place attachment. A literature review of over 70 papers involving place attachment is well summarized by Hine, Pretty, and Barton’s 2009 study *Social, Psychological and Cultural Benefits of Large Natural Habitat and Wilderness Experience*. Hine et al.(2009) found the environmental experience benefits to be very positive and included changes in: health and sense of self, behaviour, feelings of connection to nature, family relationships, social aspects or relationships with others, education, spiritual aspects, cultural considerations, and economic situations. Hine et al (2009) also reported a great sense of connectedness to nature lead to a sense of belonging in the natural world. Educational benefits included improved interpersonal skills, communication skills, coping strategies, and practical wilderness skills. Additional studies have found nurturing plants and animals could be an essential part of human development. Humans of all ages benefit from natural experiences and exposure to nature can foster psychological well-being, reduce stress, and promote physical health (Maller, Townsend, & St Leger, 2009).

A Possible Relationship

The areas of brain affected by emotional attachment are the limbic system, including the amygdala, the temporal lobes, and the prefrontal cortex (Nelson, 2012). The areas of the brain affected by place attachment are the limbic system, including the amygdala, and the prefrontal cortex (Lengen & Kistemann, 2012). The prefrontal cortex is responsible for memory and planning (Lenzi, et al., 2013). The amygdala is responsible for emotions and social cognitions (Carlson, 2013). The brain of a subject with a dismissing emotional attachment style will deactivate the fronto-medial areas, creating emotional disinvestment; simultaneously, the subject

will demonstrate hyperactivity of the limbic area of the brain (Lenzi, et al., 2013); and, an enlarged amygdala as a result of processing (Nelson, 2012).

In Summary

The field of ECEC advances and adjusts as new information and research becomes available.

The research on emotional attachment and young children has been well documented in recent years and many professionals have adapted their programming to reflect the information gained.

This particular research project will present the importance of place attachment, a less-known phenomenon in ECEC, and demonstrate the relationships that exist between emotional attachment and place attachment. The relationship of place attachment and emotional attachment could help professionals to bridge the gap faced by many children involved in the social system.

As Gordon Jack demonstrates in his journal article, *Place matters: The significance of place attachments for children's well-being* (2010), coupling place and emotional attachment in the field of ECEC can help support a more emotionally aware generation of children.

OBJECTIVE

The objective of this work is to study the strength of the relationship between global emotional attachment and place attachment. The expectations of this study are: (1) adults that tend to form secure emotional attachments will confirm strong place attachments from their childhoods (2) adults of less secure emotional attachments will present with insecure place attachment from their childhoods.

METHODS

Sampling Procedure

The 100 participants in this research were selected at random using the Verbal Script (see Appendix A) in Old Main on the Thompson Rivers University campus from September 9, 2013 to October 2, 2013. The participants were between the ages of 19 and 60. Eighty-eight (88%) of the participants were under 30 years of age and 12 (12%) were over 30 years of age. There were 57 (57%) female participants and 43 (43%) male participants.

Emotional Attachment Measures

The Emotional Attachment Questionnaire (see Appendix A) was modeled after The Relationship Structures (ECR-RS) questionnaire. It is a self-rating or reporting tool used to assess emotional attachment. The first article published using the ECR-RS (2006) was *Adult attachment and the perception of emotional expressions: Probing the hyperactivating strategies underlying anxious attachment* in 2006 by Fraley et al. The ECR-RS has since been discussed in two specific reports: *The experiences in close relationships-relationship structures questionnaire: A method for assessing attachment orientations across relationships* by R.Chris Fraley, Marie E. Heffernan, Amanda M. Vicary, and Claudia C. Brumbaugh (2011) and *Patterns of stability in adult attachment: An empirical test of two models of continuity and change* by R. Chris Fraley, Amanda M. Vicary, Claudia C. Brumbaugh, and Glen I. Roisman (2011). The ECR-RS has been published in The Journal of Personality and has been deemed available to for use in the public domain (Fraley, Heffernan, Vicary, & Brumbaugh, 2011); confirmation via personal communication (see Appendix C), the use for this research was deemed appropriate and approved by the authors.

The Emotional Attachment Questionnaire is a nine statement self-rating schedule to assess the participant's attachment style. The participants were asked to rate the statements as they apply to the participants' personal experiences using the Likkert scale to self-rate "Strongly Disagree", 1, to "Strongly Agree", 7. To create a general or global attachment assessment, the Emotional Attachment Questionnaire was given with the instructions for participants to: "Please respond to the following statements about an important person in your life".

To score the questionnaire, the final five statements were reversed and then the results were averaged. This was the method prescribed in the 2011 article: *The Experiences in Close Relationships-Relationship Structures Questionnaire: A method for assessing attachment orientations across relationships*. Fraley et al. also stated any variance less than 1 was deemed “stronger global attachment”.

Place Attachment Measures

The Place Attachment Questionnaire (see Appendix A) was designed to determine the participant’s level of dependence and identity of the places named: City, Park, Indoors, and Outdoors. The terms were paired to identify an attachment to urban or natural areas and an attachment to indoors or outdoors. The terms are defined as City: Urban areas, paved sidewalks/roadways. Park: Natural areas, parks/gardens/grasslands. Indoors: Inside buildings. Outdoors: Outside buildings. By asking the participant to identify the most correct response in relation to their personal experiences of a pair of terms, four possible outcomes could be calculated: City-Indoor, City-Outdoor, Park-Indoor, and Park-Outdoor. The participant could declare a strong or weak level of dependence and identity of place through self-rating the most correct response to 8 statements.

The first 4 statements were to rate positive dependence and identity and the second 4 statements were to rate negative dependence and identity. To calculate the questionnaire, the second 4 statements were reversed and each term (City, Park, Indoors, Outdoors) was summed individually. The terms were then paired to be averaged (City-Indoor, City-Outdoor, Park-Indoor, Park-Outdoor). The rating of 7-8 was determined to be a secure place attachment rating as the participant’s response was consistent 87.5% or greater.

PROCEDURES

Seeking Permission

Initially, prior to the research beginning, a written email was obtained confirming the correct use of the ECR-RS from R. Chris Fraley (see Appendix C). Upon receipt of this confirmation, the proposal for this research was then submitted to the Ethics Review Board of Thompson Rivers University (see Appendix C). A certificate to conduct research was awarded on the 3rd of September, 2013 and valid for 364 days.

Informing the Participants

Individual participants were provided with the Verbal Script (see Appendix A) in Old Main on the Thompson Rivers University campus from September 9, 2013 to October 2, 2013.

Participants were requested to sign an informed letter of consent (see Appendix A) regarding the purpose of the research, their participation, and the potential future uses of the project results.

Collecting the Data

The researcher approached potential participants in the Old Main building and requested participation using the Verbal Script (see Appendix A). The data was collected in pen and paper format. Once the total number of participants was acquired, the researcher compiled and sorted the questionnaires for data analysis by scanning and saving in digital format. The paper copies were destroyed once the digital copies were completed.

RESULTS

A total of 100 questionnaires were completed. The participants were between the ages of 19 and 60; 88 (88%) of the participants were under 30 years of age and 12 (12%) were over 30 years of age. There were 57 (57%) female participants and 43 (43%) male participants.

Quantitative Results of Global Emotional Attachment Questionnaire

Of the 100 participants in this study, 61 (61%) disclosed a stronger global attachment rating; of the rating, 35 (35%) participants self-rated between 6 and 6.4 of the stronger global attachment rating and 24 (24%) participants self-rated between 6.5 and 7.0 of the stronger global attachment rating (Table 1-1 and Chart 1-1). R. Chris Fraley's article *A Brief Overview of Adult Attachment Theory and Research* (2010) found 60% of adults disclosed a secure rating, similar to the stronger global attachment rating. Fraley (2010) also found 20% of adults disclosed an anxious rating and another 20% of adults disclosed an avoidant rating, similar to the weaker global attachment rating of 39%. This particular article supports the findings of this research project.

The female participants disclosed a stronger global attachment more often than male participants (Table 1-2 and Chart 1-2); of the 61 (61%) stronger global participants, 38 or 62.2% were female and 23 or 37.8% were male. This particular data leads to the assumption that males have weaker global attachments than females.

Table 1-1

Global Emotional Attachment	
Rating	Participants
3.6	1
3.7	1
3.8	0
3.9	0
4	1
4.1	1
4.2	1
4.3	1
4.4	0
4.5	0
4.6	0
4.7	1
4.8	0
4.9	2
5	0
5.1	2
5.2	2
5.3	1
5.4	6
5.5	0
5.6	4
5.7	5
5.8	7
5.9	3
6	3
6.1	13
6.2	6
6.3	11
6.4	4
6.5	0
6.6	2
6.7	8
6.8	3
6.9	11

Chart 1-1

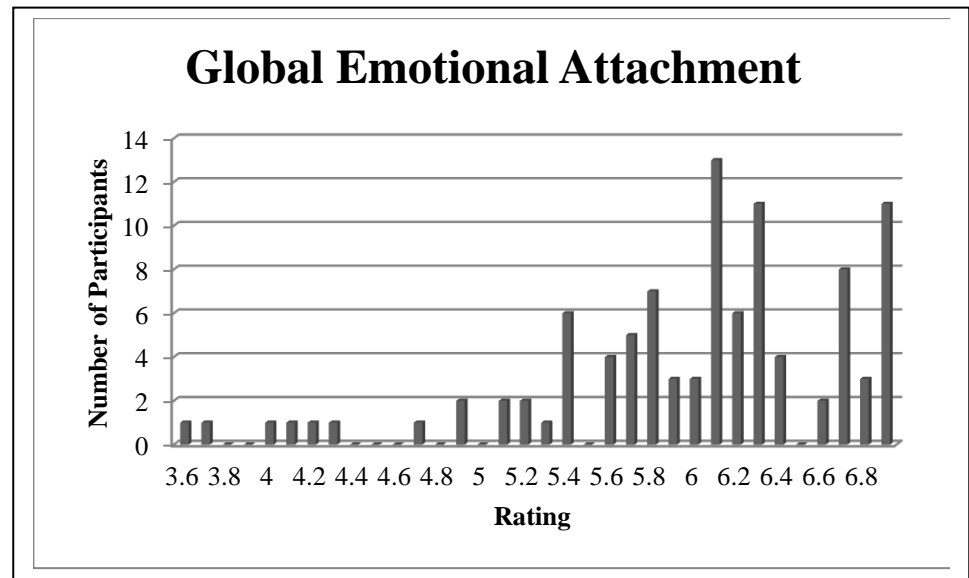
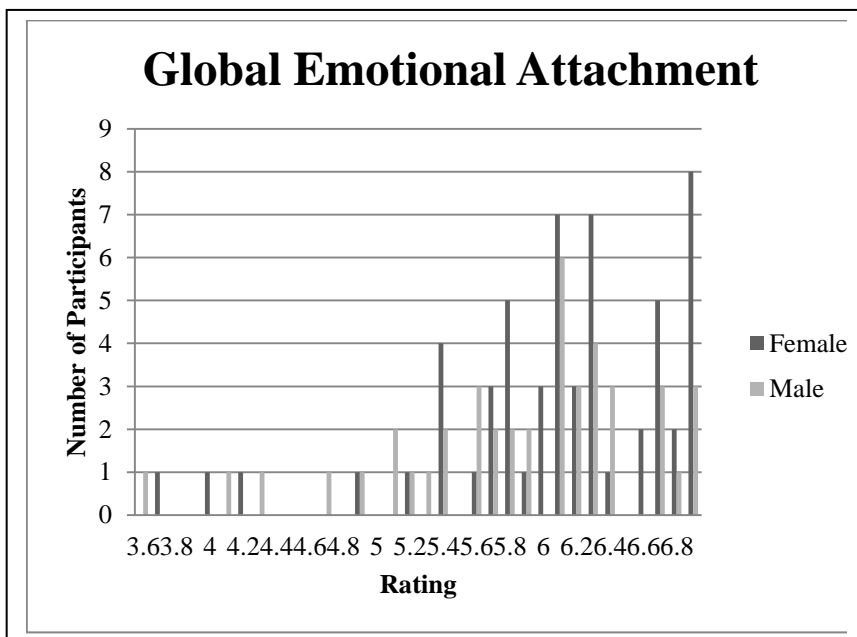


Table 1-2

Global Emotional Attachment		
Rating	Female	Male
3.6	0	1
3.7	1	0
3.8	0	0
3.9	0	0
4	1	0
4.1	0	1
4.2	1	0
4.3	0	1
4.4	0	0
4.5	0	0
4.6	0	0
4.7	0	1
4.8	0	0
4.9	1	1
5	0	0
5.1	0	2
5.2	1	1
5.3	0	1
5.4	4	2
5.5	0	0
5.6	1	3
5.7	3	2
5.8	5	2
5.9	1	2
6	3	0
6.1	7	6
6.2	3	3
6.3	7	4
6.4	1	3
6.5	0	0
6.6	2	0
6.7	5	3
6.8	2	1
6.9	8	3

Chart 1-2



Quantitative Results of Place Attachment Questionnaire

The results of this study indicate 58(58%) of the 100 participants disclosed a self-rating of 7-8, a secure place attachment rating. Twenty-seven of the 58 participants (46.6%) were at the lowest secure place attachment rating of 7. Nine of the 58 participants (15.5%) were in the middle of the secure place attachment rating of 7.5. Twenty-two of the 58 participants (37.9%) were at the high secure place attachment rating of 7.8 (Table 2-1 and Chart 2-1). The female participants self-rated secure place attachment more often than the male participants (Table 2-2 and Chart 2-2). Of the 58 secure place attachment participants, 36 or 62.1% were female and 22 or 37.9% were male.

The female participants self-rated secure place attachment more often than the male participants (Table 2-2 and Chart 2-2). Of the 58 secure place attachment participants, 36 or 62.1% were female and 22 or 37.9% were male. This data leads to the assumption that females have stronger place attachments than males. Sayers Stephanie Fowler's 1991 article, *Community Attachments: A research note examining the effects of gender*, found females were more likely to disclose feelings of community attachment rather than male participants.

Table 2-1

Percentage of Place Attachment	
Rating	Participants
4	1%
4.3	0%
4.5	6%
4.8	0%
5	5%
5.3	0%
5.5	3%
5.8	0%
6	14%
6.3	0%
6.5	13%
6.8	0%
7	27%
7.3	0%
7.5	9%
7.8	22%

Chart 2-1

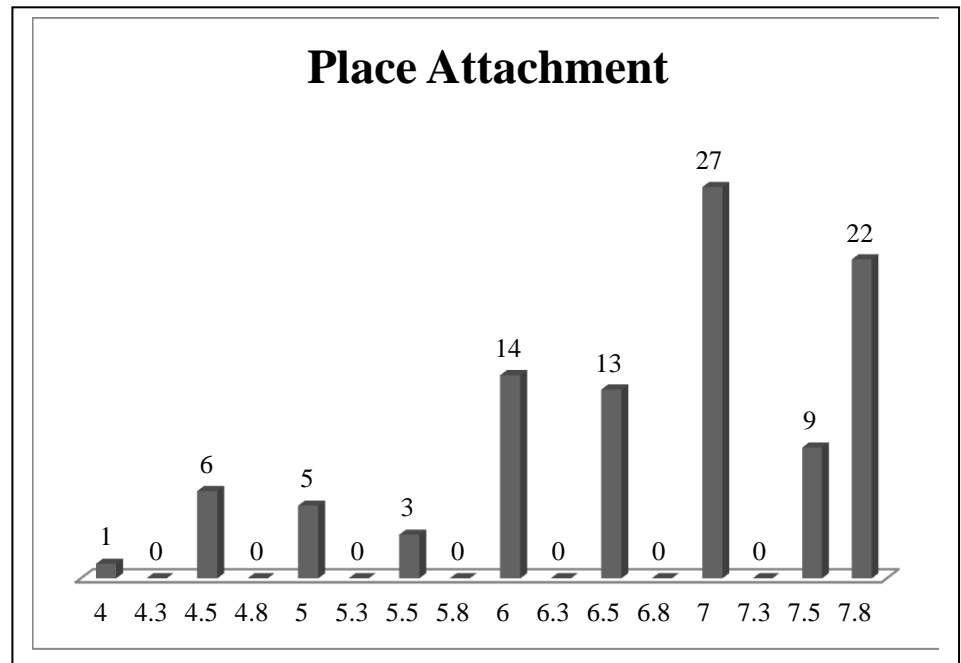
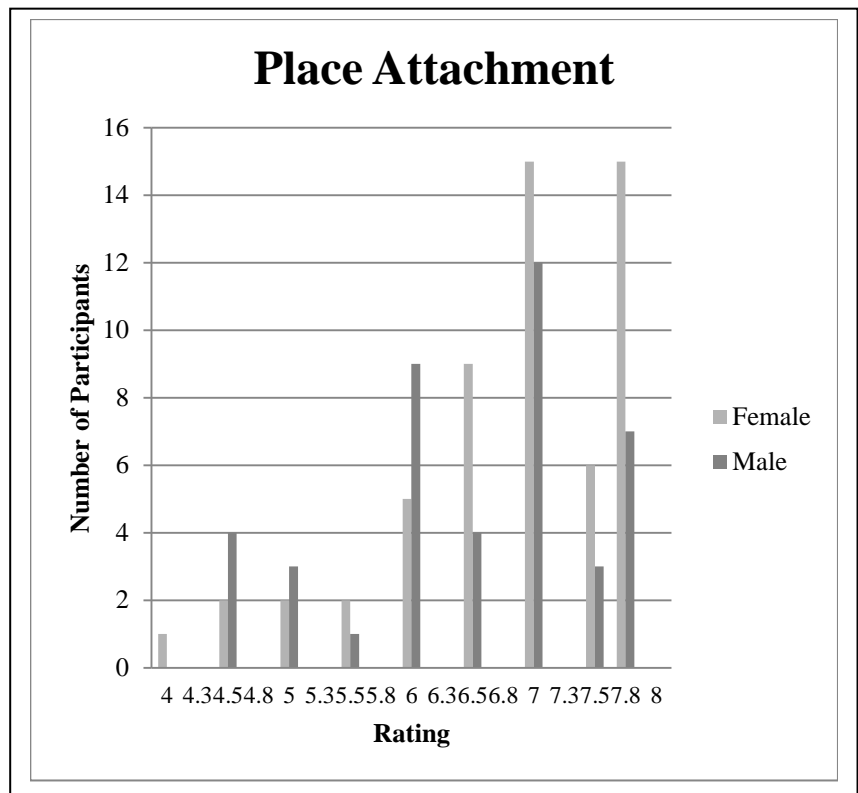


Table 2-2

Place Attachment		
Rating	Female	Male
4	1	0
4.3	0	0
4.5	2	4
4.8	0	0
5	2	3
5.3	0	0
5.5	2	1
5.8	0	0
6	5	9
6.3	0	0
6.5	9	4
6.8	0	0
7	15	12
7.3	0	0
7.5	6	3
7.8	15	7
8	0	0

Chart 2-2



Correlation Results

Using Pearson's Coefficient, a linear relationship between two variables was determined; global emotional attachment was found to be weakly positively correlated with place attachment at 0.242 with a sample size of 100 (Chart 3-1). This positive correlation can lead to the assumption that positive emotional attachment as an adult and positive place attachment as a child are related.

Of the 100 participants, 49 (49%) self-rated a stronger emotional attachment and a stronger place attachment, 20 (20%) of the participants self-rated a weaker emotional attachment and a weaker place attachment, and 31 (31%) of the participants self-rated a stronger emotional attachment and a weaker place attachment or a weaker place attachment and a stronger place attachment. Of the 57 female participants, 33 (57.9%) self-rated a stronger emotional attachment and a stronger place attachment, 10 (17.5%) self-rated a weaker emotional attachment and a weaker place attachment, and 14 (24.6%) self-rated another combination of attachments. Of the 43 male participants, 16 (37.2%) self-rated a stronger emotional attachment and a stronger place attachment, 10 (23.3%) self-rated a weaker emotional attachment and a weaker place attachment, and 17 (39.5%) self-rated another combination of attachments. (Table 3-1 and Chart 3-2)

Chart 3-1

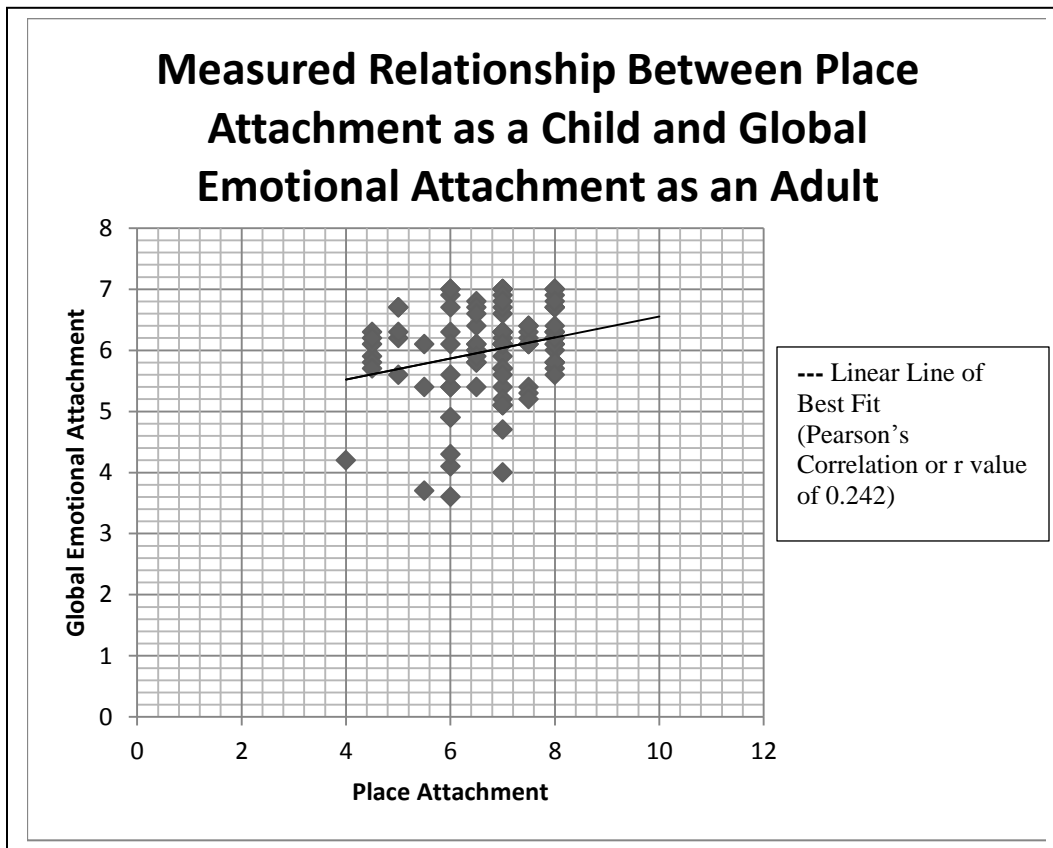
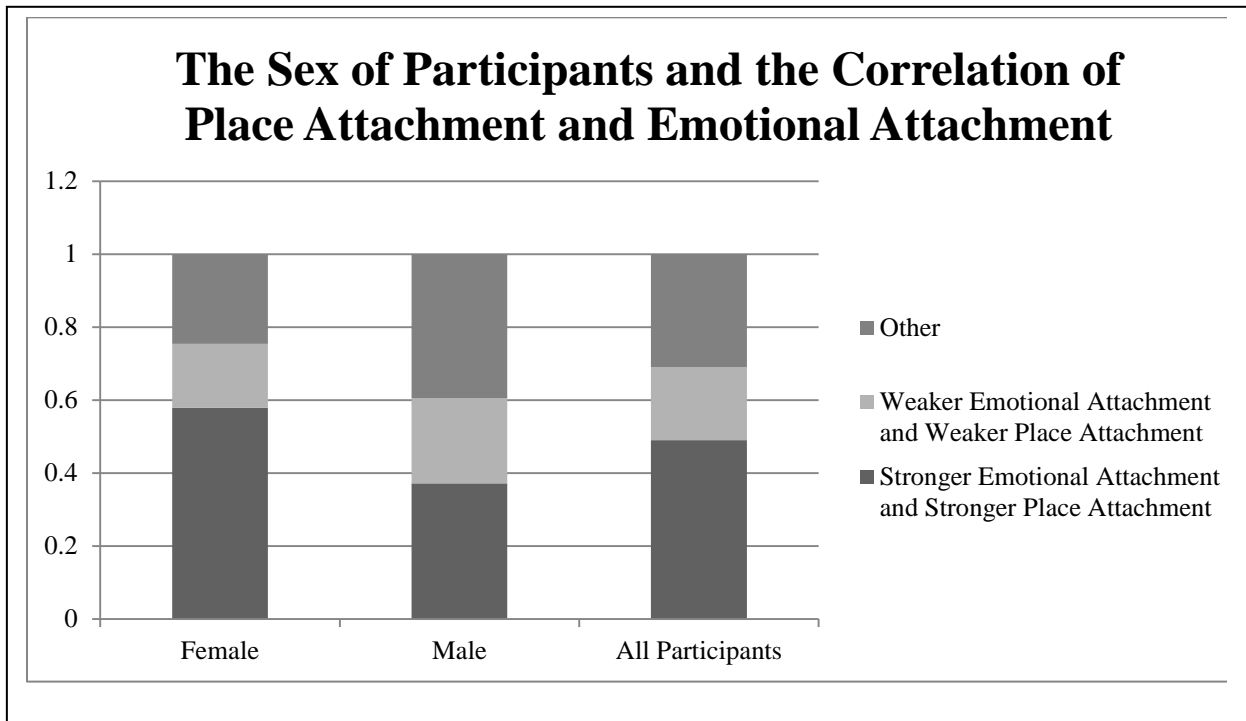


Table 3-1

	Stronger Emotional Attachment and Stronger Place Attachment	Weaker Emotional Attachment and Weaker Place Attachment	Other
Female	0.578947	0.175439	0.245614
Male	0.372093	0.232558	0.395349
All Participants	0.49	0.2	0.31

Chart 3-2



DISCUSSION

The objective of this work was to study the strength of the relationship between global emotional attachment and place attachment and to identify if emotional attachment can be linked to place attachment; the results of this research project remain inconclusive.

Patterns and Common Themes in Responses

Place Attachment

This research project was limited by the age and size of the sample. The size of the sample was 100 participants; however, the age range of participants was very limited as 88 (88%) participants were under 30 years of age and 12 (12%) were over 30 years of age. The sex of the participants was 57 (57%) female and 43 (43%) male, which was near enough to 50% to satisfy the need for comparison of the sexes. Both the qualitative and quantitative results seem to indicate a small positive correlation between global emotional attachment and place attachment; females self-rated stronger place attachment than males. This data supports the work of Fowler's 1991 article in that both research projects resulted in females self-rating higher community or place attachments than males.

Emotional Attachment

This study confirms and supports the findings of Giudice (2009) and Ferber (2009) in that female participants disclosed a stronger global emotional attachment more often than male participants and 79% of males show higher avoidance scales. Furthermore, differences in attachment styles may exist between genders due to the differences in the gender constructs of society (Ferber, 2009).

Conclusion

The intent of this questionnaire research project was to add to the discussion on the correlation of place and emotional attachment. The Place Attachment questionnaire was untested; further research into the tool is necessary to validate its accuracy in predicting the participants' place attachment. The self-rating Emotional Attachment Questionnaire (see Appendix A) was modelled after The Relationship Structures (ECR-RS) Questionnaire (2011), a tool that has been tested multiple times for accuracy in its predictions.

Limitations of Design Threats to Internal and External Validity

Internal Validity

The results from this study may have been affected by certain standards internal validity limitations including history, subject selection, instrumentation, subject and experimenter effects and statistical conclusion. The threat of history defined as "extraneous incidents or events affecting the results that occur during research" (MacMillan & Schumacker, 1997, p. 184) must always be considered whether it comes from the world at large or from the classroom. Secondly the selection of subjects may have posed certain limitations. The ethics approval, received from Thompson Rivers University in September 2013, was limited to all questionnaires being completed in the Old Main building. As the research was collected only in the one location, it can be assumed this is not a realistic sample of the citizens of Kamloops, BC. Furthermore, as the Place Attachment Questionnaire is still in a somewhat developmental phase, results may have varied due to misinterpretation or poorly written questions. As the questionnaires were administered by the researcher, researcher bias may have influenced the completion of the tool(s). Although internal validity can be difficult to control, it is possible that correlation results are reasonable.

External Validity

The questionnaires are keyed to a very broad spectrum of populations and encourage self-reporting. As this project was limited to a specific population, generalizability and external validity may not be noteworthy. It will however add to the data collected on the correlation of place and emotional attachment and provide recommendations to be considered for future research.

Overall Conclusion

Through data collection and analysis of the results participants contributed their interpretations of place and emotional attachment. This group of participants supported many of the findings from the literature and previous works of Fraley (2010), Fraley, et al. (2011), Kyle, et al. (2004), Lengen (2012), Hine, et al. (2009), and Lenzi, et al. (2013). While the simple answer to the research question is: yes, there appears to be a correlation between emotional attachment and place attachment; however, much more in depth research is necessary to increase the confidence

in the results obtained. This can be done by increasing the number of participants to increase confidence.

Recommendations

The research indicates place attachment is related to emotional attachment. This could impact future programs for children in that children should remain in a consistent environment. Moving children from their neighbourhoods, homes, child care centers, or schools could lead to weaker place attachments and may present weaker global emotional attachments as adults.

Possibilities for Future Research

Future studies in the area of Emotional and Place attachment could include: (a) similar self-reporting questionnaire based research of place based attachment as a child and emotional attachment as an adult, (b) additional self-rating Place Attachment Questionnaire tool development, and (c) additional research into a relationship between residing within a consistent neighbourhood and a possible place and emotional attachment.

Summary

The qualitative and quantitative data appear to indicate place attachment and emotional attachment are related; however, it is unclear as to the exact relationship. This questionnaire research project has demonstrated that the relationship between place attachment and emotional attachment is worth researching further. Due to 49 (49%) participants self-rating a stronger emotional attachment and a stronger place attachment and 20 (20%) participants self-rating weaker emotional attachment and weaker place attachment, it can be concluded 69 (69%) of participants confirmed the proposed idea of a relationship between emotional attachment as an adult and place attachment as a child.

On a personal level, as a researcher, this project has highlighted the importance of the presentation of a questionnaire tool, including clarity of the questions asked. The researcher has also learned the necessity of creating a means for ensuring higher returns in order to have a stronger data set to draw from. As someone interested in the importance of positive attachment for holistic human development and growth, the researcher continues to support the ongoing research of others in the field.

APPENDIX A

Documents

VERBAL RECRUITMENT SCRIPT (verbal, in person)

My name is Shawna Holmes, an undergraduate student from the Interdisciplinary Department of Thompson Rivers University. I would like to invite you to participate in my research study named: Emotional Attachment: Does Place Play a Role? This study is designed to document a possible correlation between attachment to a physical place (natural or urban) as a child and secure emotional attachment as an adult. You may participate if you are between the ages of 19 and 60, and English is your first language. Please do not participate if you do not have a reliable working memory of your childhood.

As a participant, you will be asked to spend 15 minutes filling out this brief questionnaire.

(Briefly discuss any risks, compensation or benefits, costs, privacy issues, or other information that would likely influence the participant's interest in the study)

If you would like to participate in this research study, please provide proof of your age (what is your birth year?) and complete this consent form.

Do you have any questions now? If you have questions later, please contact me by email at holmess114@tru.ca or you may contact my supervisor, Dr. Mark Wallin, at (250)377-6072.

THOMPSON RIVERS UNIVERSITY

Informed Consent by Subjects to Participate in a Student Research Project or Experiment

I agree to participate in the study conducted by Shawna Holmes in partial completion of an Interdisciplinary Degree supervised by Patricia McClelland (604)485-2169, Instructor of Early Care and Learning/Education Assistant Programs of Northern Lights College, and Mark Wallin (250)377-6072, Interdisciplinary Coordinator of Thompson Rivers University.

The study is entitled Emotional Attachment: Does Place Play a Role? This study is designed to document a possible correlation between attachment to a physical place (natural or urban) as a child and secure emotional attachment as an adult. Data will be gathered through a questionnaire. The questionnaire will take approximately 15 minutes for a participant to complete.

I understand that all information, including the respondents' names, will be treated in the strictest of confidence. All questionnaires will be placed in a secure envelope and will be stored in a locked cabinet. The paper documents will be scanned and shredded. The electronic documents will be stored on a UBS device, locked in a secure cabinet, and the USB device will be erased after 7 years.

I further understand that an initial agreement does not obligate me in any way and I can withdraw from the study at any time without any negative repercussions. The researcher will collect the forms and store them securely until they can be shredded. This process of withdrawing consent will take one week or less to complete.

If you have any questions or concerns about this study, please contact the Chair, Research Ethics Board at 250-828-5000, and/or contact Dr. Mark Wallin, IDIS Coordinator, at (250)377-6072, and/or complete the Participant Feedback Form.

PARTICIPANT'S NAME: _____ SIGNATURE: _____

DATE: _____

RESEARCHER'S NAME: _____ SIGNATURE: _____

DATE: _____

EMOTIONAL ATTACHMENT: DOES PLACE PLAY A ROLE QUESTIONNAIRE

Background

Are you male or female?

What is your birth year?

Part One:

Please respond to the following statements about an important person in your life.

1. It helps to turn to this person in times of need.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

2. I usually discuss my problems and concerns with this person.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

3. I talk things over with this person.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

4. I find it easy to depend on this person.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

5. I don't feel comfortable opening up to this person.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

6. I prefer not to show this person how I feel deep down.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

7. I often worry this person doesn't really care for me.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

8. I'm afraid this person may abandon me.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

9. I worry this person won't care about me as much as I care about him or her.

Strongly Disagree 1 2 3 4 5 6 7 Strongly Agree

Technical notes: The items used in this questionnaire come from the Experiences in Close Relationships – Relationship Structures (ECR-RS) questionnaire, by Fraley, Heffernan, Vicary, and Braumbaugh (2011).

Fraley, R. C., Heffernan, M. E., Vicary, A. M., & Braumbaugh, C. C. (2011). The Experiences in Close Relationships-Relationship Structures questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment*, 23, 615-625.

Part Two:

Think back to when you were under 12 years of age, please indicate by circling the most correct answer for each pair of the places listed.

City = Urban areas, paved sidewalks/roadways

Park = Natural areas, parks/gardens/grasslands

Indoors = Inside buildings

Outdoors = Outside buildings

This place is where I preferred to spend my time	City/Park	Indoors/Outdoors
I couldn't imagine a better place for what I liked to do	City/Park	Indoors/Outdoors
I felt like this place was a part of me	City/Park	Indoors/Outdoors
I felt most like myself in this place	City/Park	Indoors/Outdoors
The time I spent here could be spent elsewhere	City/Park	Indoors/Outdoors
I had negative feelings for this place	City/Park	Indoors/Outdoors
Sometimes I felt like I did not belong in this place	City/Park	Indoors/Outdoors
I had no emotional attachment to this place	City/Park	Indoors/Outdoors

APPENDIX B

References

- (2013). *Nature Kindergarten: Year One Report*. Sooke: School District 62.
- Badanes, L. S., Dmitriev, J., & Watamura, S. E. (2011). Understanding cortisol reactivity across the day at child care: The potential buffering role of secure attachments to caregivers. *Early Childhood Research Quarterly*, 156-165.
- Banning, W., & Sullivan, G. (2011). *Lens on Outdoor Learning*. United States of America: Redleaf Press.
- Benoit, D. (2004). Infant-parent attachment: Definition, types, antecedents, measurement and outcome. *Paediatric Child Health*, 541-545.
- Bretherton, I. (1985). Attachment theory: Retrospect and prospect. *Monographs of the Society for Research in Child Development*, 3035.
- Carlson, N. R. (2013). *Physiology of Behavior*. New Jersey: Pearson Education Inc.
- Ferber, S. G. (2009). Co-regulation of stress in uterus and during early infancy mediates early programming of gender differences in attachment styles: Evolutionary, genetic, and endocrinal perspectives. *Behavioral and Brain Sciences*, 29-30.
- Fowler, S. S. (1991). Community Attachments: A research note examining the effects of gender. *Southern Rural Sociology*, 59-70.
- Fraley, R. C. (2010). A brief overview of adult attachment theory and research. Illinois, USA: University of Illinois.
- Fraley, R. C., Fazzari, D. A., Bonanno, G. A., & Dekel, S. (2006). Adult attachment and the perception of emotional expressions: Probing the hyperactivating strategies underlying anxious attachment. *Journal of Personality*, 1163-1190.
- Fraley, R. C., Heffernan, M. E., Vicary, A. M., & Brumbaugh, C. C. (2011). The experiences in close relationships-relationship structures questionnaire: A method for assessing attachment orientations across relationships. *Psychological Assessment*, 615-625.
- Fraley, R. C., Vicary, A. M., Brumbaugh, C. C., & Roisman, G. I. (2011). Patterns of stability in adult attachment: An empirical test of two models of continuity and change. *Journal of Personality and Social Psychology*, 974-992.
- Giudice, M. D. (2009). Sex, attachment, and the development of reproductive strategies. *Behavioral and Brain Sciences*, 1-67.
- Gliga, T. (2012). *The Social Brain*. United Kingdom: The Open University.

- Hernandez, B., Hidalgo, M. C., Salazar-Laplace, M. E., & Hess, S. (2007). Place attachment and place identity in natives and non-natives. *Journal of Environmental Psychology*, 310-319.
- Hine, R., Pretty, J., & Barton, J. (2009). *Social, Psychological and Cultural Benefits of Large Natural Habitat and Wilderness Experience*. Colchester: University of Essex.
- Jack, G. (2010). Place matters: The significance of place attachments for children's well-being. *British Journal of Social Work*, 755-771.
- Kyle, G. T., Absher, J. D., & Graefe, A. R. (2003). The moderating role of place attachment on the relationship between attitudes toward fees and spending preferences. *Leisure Sciences*, 33-50.
- Kyle, G., Graefe, A., Manning, R., & Bacon, J. (2004). The effect of place attachment on users' perception of social and environmental conditions encountered in a national area. *Journal of Environmental Psychology*, 213-225.
- Lengen, C., & Kistemann, T. (2012). Sense of place and place identity: Review of neuroscientific evidence. *Health & Place*, 1162-1171.
- Lenzi, D., Trentini, C., Pantano, P., Macaluso, E., Lenzi, G. L., & Ammaniti, M. (2013). Attachment models affect brain responses in areas related to emotions and empathy in nulliparous women. *Human Brain Mapping*, 1399-1414.
- Louv, R. (2008). *Last Child in the Woods*. New York : Algonquin Books of Chapel Hill.
- Louv, R. (2012). *The Nature Principle*. New York: Algonquin Books of Chapel Hill.
- MacMillan, J. H., & Schumacker, S. (1997). *Research in Education: A Conceptual Introduction*. New York: Addison Wesley Longman Publishers.
- Maller, C., Townsend, M., & St Leger, L. (2009). Healthy parks, healthy people: The health benefits of contact with nature in a park context. *The George Wright Forum*, 51-83.
- Mitchell, B. A. (2009). *Family Matters: An Introduction to Family Sociology in Canada*. Toronto: Canadian Scholars' Press Inc.
- Nelson, C. A. (2012). *The effects of early psychosocial deprivation*. United Kingdom: The Open University.
- Pugh, A. (2009). *Longing and Belonging: Parents, Children, and Consumer Culture*. Berkeley: University of California Press.
- School District 62. (2012). *Nature Kindergarten*. Retrieved from Nature Kindergarten: learning outside the box: <http://naturekindergarten.sd62.bc.ca/>
- Victoria Nature School: About Us. (n.d.). Retrieved from Victoria Nature School: http://www.victorianatureschool.com/#!/about_us/cjg9

- Vermeer, H. J., & van IJzendoorn, M. (2006). Children's elevated cortisol levels at daycare: A review and meta-analysis. *Early Childhood Research Quarterly*, 390-401.
- Williams, D. R., Patterson, M. E., Roggenbuck, J. W., & Watson, A. E. (1992). Beyond the commodity metaphor: Examining emotional and symbolic attachment to place. *Leisure Sciences*, 29-46.

APPENDIX C

Copy of Letter of Support from Supervisor

November 2013

To whom it may concern,

I, Patricia McClelland am in support of Shawna Holmes pursuing her undergraduate thesis research project *Exploring possible correlation between adults' attachment style and their childhood experiences- particularly outdoor/natural experiences* . I understand she is planning to use The Relationship Structures (ECR-RS) questionnaire, a self-reporting tool designed to assess attachment patterns ,in combination with additional questions regarding early childhood experiences. This work will add to the work of Hesse, The Adult Attachment Interview: Historical and Current Perspectives in Attachment Theory, Research and Clinical Applications (2nd ed.), edited by J. Cassidy and P. R. Shaver, Guilford Press, NY, 2008. tapping into adult representation of attachment by assessing general and specific recollections from their childhood. Finally the study will work towards enhancing some understandings of the diverse benefits for children of contact with nature and outdoor experiences, towards the development of a positive self-image, confidence in one's abilities and experience of dealing with uncertainty can be important in helping young people face the wider world and develop enhanced social skills." (Ward Thompson et al, 2006)

Patricia McClelland
Instructor Early Care and Learning
Northern Lights College
pmcclelland@nlc.bc.ca
office 604 485 2169
skype patriciamcc3

The Committee:

1. Patricia McClelland
 - M.Ed. B.A. ECEC
 - Involved in ECEBC
 - Published current research
 - Instructor at Northern Lights College in the Early Care and Learning
2. Shirley Giroux
 - B.Sc., B.Ed., M.Ed.
 - Current research: Emotional Intelligence (2012)
3. Lia Vivian
 - B.A. (Psychology Major)
 - Key Worker/Behavior Consultant at Insight Support Services

Email Requesting Permission to Use ECR-RS

Re: Requesting Permission ECR-RS

27/05/2013

To: Shawna Holmes



Please feel free to use it. Good luck with your work.

~ Chris

R. Chris Fraley

University of Illinois at Urbana-Champaign

Department of Psychology

603 East Daniel Street

Champaign, IL 61820

Internet: <http://www.psych.uiuc.edu/~rcfraley/>

--

On Mon, May 27, 2013 at 11:43 AM, Shawna Holmes <shawnalh@live.ca> wrote:

Hello,

I am a fourth-year Interdisciplinary student at Thompson Rivers University in Kamloops, BC. I am interested in using your ECR-RS Questionnaire as a model for my research, but I was unable to find whether or not I was required to officially request permission from the authors. Your official webpage lead me to believe that I could use the ECR-R questionnaire, but the ECR-RS page was more ambiguous.

I am sorry if this is somewhat informal, but I would appreciate a response.

Thank you,

Shawna Holmes

Certificate of Approval from Thompson Rivers University Ethics Review Board

Project Title	Principal Investigator	File No.	Type	Application Form Name
Emotional Attachment: Does Place Play a Role?	Ms. Shawna Holmes	100450	Human Ethics	Human Ethics Research Application – Faculty & Graduate Students & Undergraduate Students